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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,287	01/23/2002	Burnell G. West	M-12401 US	9790

7590 02/25/2004

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EXAMINER	
LE, JOHN H	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	10/056,287	WEST, BURNELL G.	
	Examiner	Art Unit	
	John H Le	2863	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☐ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1-32*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

Continuation of 5. does NOT place the application in condition for allowance because: Timestamping events with a resolution of less than one clock cycle raises issues of new matter. Since all events are driven by the clock, with the clock cycle being the smallest timing unit, it would be impossibe to timestamping events with resolution of less than one clock cycle. Thus, "the time at which the events occurs within the specific clock cycle of the reference clock" is construed to means the time equal to one clock cycle.

John Barlow
Supervisory Patent Examiner
Technology Center 2600

AF/2863

Attorney Docket No.: NPT-65.0363

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this transmittal of the below described document is being deposited with the United States Postal Service in an envelope bearing First Class Postage and addressed to the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date of deposit.

Date of Deposit:	12/31/03	Name of Person Making the Deposit:	David Castro	Signature of the Person Making the Deposit:	

In re Application of: Burnell G. WEST

Serial No.: 10/056,287 Examiner: John H. Le

Filed: 1/23/02 Art Unit: 2863

For: CIRCUIT AND METHOD FOR DISTRIBUTING EVENTS IN AN EVENT STREAM

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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JL
02/23/04

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application

X Transmitted herewith is a response to an office action for the above identified patent application. (10 sheets)

____ Transmitted herewith are _____ sheets of amended informal drawings.

____ Other:

2. Applicant is other than a small entity.

Extension of Term

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(a) [ ] Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)-(d) for the total number of months checked below:)

Extension	Fee
[ ] one month	$110.00
[ ] two months	$420.00
[ ] three months	$950.00
[ ] four months	$2,010.00

Fee $ 0.00

If an additional extension of time is required, please consider this a petition therefor.

(b) [X] Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

AMENDMENTS TO THE CLAIMS

LISTING OF THE CLAIMS (1-42)

Claim 1 (Previously amended): A method for timestamping events in a primary event stream, the method comprising:

receiving the primary event stream;

distributing events in the primary event stream among a plurality of secondary event streams; and

timestamping events in each of the secondary event streams with a resolution of less than one clock cycle.

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Claim 2 (original): The method of Claim 1 wherein an event rate in each of the secondary event streams is lower than an event rate in the primary event stream.

Claim 3 (original): The method of Claim 1 wherein the relative timing of the events in the primary event stream is maintained in each of the secondary event streams.

Claim 4 (original): The method of Claim 1 wherein the primary event stream is a differential signal.

Claim 5 (original): The method of Claim 1 wherein the secondary event streams are differential signals.

Claim 6 (Previously amended): The method of Claim 1 wherein distributing events in the primary event stream comprises selectively enabling a plurality of gates such that a first event in the primary event stream [[is]] passes through a first gate, a second event in the primary event stream passes through a second gate, and so on until an Nth event in the primary event stream passes through an Nth gate, wherein N is a positive integer.

Claim 7 (Original): The method of Claim 1 wherein distributing events in the primary event stream comprises selectively enabling a plurality of gates using a counter that is clocked by the primary event stream such that a first event in the primary event stream passes through a first gate, a second event in the primary even stream passes through a second gate, and so on until an Nth event in the primary event stream passes through an Nth gate, wherein N is a positive integer.

Claim 8 (Previously amended): The method of Claim 1 wherein distributing events in the primary event stream comprises:

distributing rising edge events in the primary event stream among a first plurality of secondary event streams; and

distributing falling edge events in the primary event stream among a second plurality of secondary event streams.

Claim 9 (original): The method of Claim 1 further comprising:

registering the events in each of the secondary event streams.

Claim 10 (Previously amended): A circuit for timestamping events with a resolution of less than one clock cycle in a primary event stream, the circuit comprising:

an event stream distributor coupled to receive the primary event stream; and

a plurality of timestamp circuits, each timestamp circuit coupled to receive a respective secondary event stream from the event stream distributor.

Claim 11 (original): The circuit of Claim 10 wherein an event rate in each of the secondary event streams is lower than an event rate in the primary event stream.

Claim 12 (original): The circuit of Claim 10 wherein the relative timing of the events in the primary event stream is maintained in each of the secondary event streams.

Claim 13 (original): The circuit of Claim 10 wherein the primary event stream is a differential signal.

Claim 14 (original): The circuit of Claim 10 wherein the secondary event streams are differential signals.

Claim 15 (original): The circuit of Claim 10 wherein the event stream distributor comprises:

a first counter coupled to receive the primary event stream; and

a first plurality of gates coupled to the first counter.

Claim 16 (original): The circuit of Claim 15 wherein the first counter is a Johnson counter.

Claim 17 (original): The circuit of Claim 15 wherein the first counter is an N-bit counter.

Claim 18 (original): The circuit of Claim 15 further comprising:

a second counter coupled to receive the primary event stream; and

a second plurality of gates coupled to the second counter.

Claim 19 (original): The circuit of Claim 10 further comprising:

a plurality of registers, each register operable to register events of one or more secondary event streams.

Claim 20 (Previously amended): A method for timestamping events with a resolution of less than one clock cycle in a primary event stream, the method comprising:

receiving the primary event stream;

distributing rising edge events in the primary event stream among a first plurality of event streams;

recording an arrival time of each event in the first plurality of secondary event streams with respect to a reference clock with a resolution of less than one clock cycle;

distributing falling edge events in the primary event stream among a second plurality of event streams; and

recording an arrival time of each event in the second plurality of secondary event streams with respect to the reference clock.

Claim 21 (original): The method of Claim 20 wherein an event rate in each secondary event stream of the first plurality and the second plurality of secondary event streams is lower than an event rate in the primary event stream.

Claim 22 (original): The method of Claim 20 wherein the primary event stream is a differential signal.

Claim 23 (original): The method of Claim 20 wherein each secondary event stream of the first plurality and the second plurality of secondary event streams are differential signals.

Claim 24 (original): The method of Claim 20 wherein distributing rising edge events comprises selectively enabling a first plurality
of gates and distributing falling edge events comprises selectively enabling a second plurality of gates.

Claim 25 (original): The method Claim 20 wherein distributing rising edge events comprises selectively enabling a first plurality of gates using a first counter that is clocked by the primary event stream and distributing falling edge events comprises selectively enabling a second plurality of gates using a second counter that is clocked by the primary event stream.

Claim 26 (Previously amended): A circuit for timestamping events with a resolution of less than one clock cycle in a signal, the circuit comprising:

a first counter coupled to receive the signal; and

a first plurality of gates, each gate of the first plurality of gates coupled to receive the signal and each gate of the first plurality of gates coupled to receive the signal and each gate of the first plurality of gates coupled to receive a respective control signal from the first counter.

Claim 27 (original): The circuit of Claim 26 wherein the first plurality of gates are AND gates.

Claim 28 (original): The circuit of Claim 26 wherein the signal is a differential signal.

Claim 29 (original): The circuit of Claim 26 wherein the signal is a single-ended signal.

Claim 30 (original): The circuit of Claim 26 wherein the first counter is a Johnson counter.

Claim 31 (original): The circuit of Claim 26 wherein the first counter is an N-bit counter.

Claim 32 (original): The circuit of Claim 26 further comprising:

a second counter coupled to receive the primary event stream; and

a second plurality of gates, each gate of the second plurality of gates coupled to receive the signal and each gate of the second plurality of gates coupled to receive a respective control signal from the seined counter.

Claims 33-42 (canceled)

REMARKS

The objections, rejections and comments of the Examiner set forth in the Office Action dated December 10, 2003 have been carefully reviewed by the Applicant. Claims 33-42 have been canceled. Claims 1-32 remain pending.

Rejections under 35 U.S.C. 112, first paragraph

Claims 1, 10, 20 and 26 are currently rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirements. It is purported that the claims include subject matter not described in the specification in such as way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time of the filing of the application, had possession of the claimed invention.

Applicant respectfully traverses the above rejections. As disclosed in paragraph 5 of the present specification, a time stamp "has two components. The first component is the specific clock cycle of the reference clock within which the event occurs. The second component is the time at which the event occurs within the specific clock cycle of the reference clock." Thus, the specification of the present invention satisfies the written description requirement with respect to a system and method for "timestamping events with a resolution of less than one clock cycle in a signal."

Rejections under 35 U.S.C. 103(a)

Claims 1 and 10 are currently rejected under 35 U.S.C. 103(a) as being anticipated by Chen et al. (US 5,642,478) in view of Baum et al. (USP 5,815,634). Claims 1-5 and 10-14 are currently rejected under 35 U.S.C. 103(a) as being

anticipated by Adelmann et al. (US 4,894,823) in view of Baum et al. Claims are currently rejected under 35 U.S.C. 103(a) as being anticipated by Boereker et al. (US 2003/0035502A1) in view of Baum et al. Applicant respectfully traverses these rejections.

The argument presented herein below are directed to Claims 1 and 10, but are equally applicable to Claims 1-5 and 10-14 rejected under Adelmann in view of Baum and Claims 20-25 rejected under Boereker et al. in view of Baum.

In response, Claims 1 and 10 have been amended to more clearly distinguish the present claimed invention from Chen. It is suggested that the combination of Chen and Baum teach or suggest "timestamping an event with a resolution of less than one clock cycle."

However, Chen does not teach or suggest a timestamp or the act of timestamping events with a resolution of less than one clock cycle. Chen teaches a timestamp for a block of data, and the timestamp is derived from an internal clock 58. One with normal skill in the art would recognize that a typical system internal clock depends upon counting an integral number of clock cycles, and thus would have a resolution that is not less than a clock cycle.

Furthermore, Baum discloses an apparatus for controlling playback of audio and video signals from an encoded stream comprising at least audio data packets, video packets, audio presentation time stamps and video presentation time stamps. Baum further discloses a synchronization resolution of one half frame, with "an allowable time drift of approximately one half of 33.33 milliseconds or 16.67 milliseconds," where "a resolution of one half frame synchronization may require a time drift of less than 1500 SCLK clock cycles." (Col. 8, lines 4-11) Thus Baum fails to disclose any teachings for an apparatus or method for timestamping with a

resolution of less than one clock cycle. The best resolution Baum discloses is in the order of half a frame equivalent to 1500 clock cycles.

Thus, no combination of Chen and Baum teaches or suggests a method and apparatus of "timestamping with a resolution of one clock cycle," as claimed by the present invention.

Lastly, Baum's patent relates to multimedia systems and time stamping of audio and video files, for synchronization and decoding /decompressing video images and audio files. Chen relates to debugging facility fro tracing hardware and software faults in distribute d digital systems. Simply nowhere does Chen or Baum include any teachings or suggestion to combine the two references.

Adelmann is directed to the handling of data as packets or streams, and are not concerned with the timing of events with a resolution of less than a clock cycle. Boerker is directed to a data reception circuit . One with normal skill in the art would recognize that the clocks relied upon by Adelmann and Boerker would not have a resolution of less than one clock cycle, as claimed in the present invention.

Conclusion

In summary, in light of the arguments presented herein, Applicant asserts that Claims 1-32 are now in condition for allowance and earnestly solicit such action by the Examiner.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: December 31, 2003

Rambod Nader
Registration Number: 47,262

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